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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/508,685	05/31/00	SORENSEN	E 9847-0036-6X

MMC1/0910

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EXAMINER	
PEREZ,G	
ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 09/10/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/508,685	SORENSEN ET AL.	
	Examiner	Art Unit	
	Guillermo Perez	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5,8* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. PCT/SE98/01741, filed on September 29, 1998. ***Specification***

Specification

This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 19, 25-29, 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trautner et al. (U. S. Pat. 4,106,069) in view of Breitenbach et al. (U. S. Pat. 4,785,138).

Trautner et al. substantially teaches the claimed invention except that it does not show a first layer that exhibits semiconducting properties and surrounds the electric conductor, a solid insulating layer surrounding the first layer, and a second layer that exhibits semiconducting properties and surrounds the insulating layer. Trautner et al. do not show that the conductor comprises a number of strands, at least some of which are in electric contact with each other. Trautner et al. do not show that each of the first

layer, the insulation layer and the second layer is firmly joined to adjacent layers along respective entire contact surfaces. Trautner et al. do not show that the layers are arranged to adhere to each other even when the electric winding is bent. Trautner et al. do not show that the cable comprises at least one of a metal screen and a sheath.

Breitenbach et al. disclose a first layer (7) that exhibits semiconducting properties and surrounds the electric conductor (5), a solid insulating layer (8) surrounding the first layer (7), and a second layer (9) that exhibits semiconducting properties and surrounds the insulating layer (8). Breitenbach et al. show that the conductor (5) comprises a number of strands (6), at least some of which are in electric contact with each other. Breitenbach et al. show that each of the first layer (7), the insulation layer (8) and the second layer (9) is firmly joined to adjacent layers along respective entire contact surfaces. Breitenbach et al. show that the layers are arranged to adhere to each other even when the electric winding is bent. Breitenbach et al. show that the cable comprises at least one of a metal screen and a sheath (10). The invention of Breitenbach et al. has the purpose of minimizing thermal aging and avoiding detaching of the layer from the conductor due to bending or axial stress.

It would have been obvious at the time the invention was made to modify the embodiment of Trautner et al. and provide it with the conductor disclosed by Breitenbach et al. for the purpose of minimizing thermal aging and avoiding detaching of the layer from the conductor due to bending or axial stress.

2. Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trautner et al. in view of Breitenbach et al. as applied to claim 19 above, and further in view of Elton et al. (U. S. Pat. 5,036,165).

Trautner et al. and Breitenbach et al. disclose an electric machine as described on item 1 above. However, neither Trautner et al. nor Breitenbach et al. disclose that a potential on the first layer is substantially equal to a potential on the conductor. Neither Trautner et al. nor Breitenbach et al. disclose that the second layer is arranged to form a substantially equipotential surface surrounding the conductor. Neither Trautner et al. nor Breitenbach et al. disclose that the second layer is connected to a source of a predetermined potential. Neither Trautner et al. nor Breitenbach et al. disclose that the predetermined potential is earth potential.

Elton et al. disclose that a potential on the first layer (104) is substantially equal to a potential on the conductor (102). Elton et al. disclose that the second layer (110) is arranged to form a substantially equipotential surface surrounding the conductor (102). Elton et al. disclose that the second layer (110) is connected to a source of a predetermined potential (114). Elton et al. disclose that the predetermined potential is earth potential. The invention of Elton et al. has the purpose of avoiding the development of a corona discharge when an electrical potential exists between the conductor and the region adjacent the exterior surface of the insulator.

It would have been obvious at the time the invention was made to modify the electric machine of Trautner et al. and Breitenbach et al. and provide it with the conductor disclosed by Elton et al. for the purpose of avoiding the development of a

corona discharge when an electrical potential exists between the conductor and the region adjacent the exterior surface of the insulator.

3. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Trautner et al. in view of Breitenbach et al. as applied to claim 19 above, and further in view of Penczynski et al. (U. S. Pat. 3,959,549).

Trautner et al. and Breitenbach et al. disclose an electric machine as described on item 1 above. However, neither Trautner et al. nor Breitenbach et al. disclose that at least two adjacent layers of the electric winding have substantially equally large coefficients of thermal expansion.

Penczynski et al. disclose that at least two adjacent layers (6, 20) of the electric winding have substantially equally large coefficients of thermal expansion (column 4, lines 37-40). The invention of Penczynski et al. has the purpose of improving the mechanical elasticity of the insulation.

It would have been obvious at the time the invention was made to modify the electric machine of Trautner et al. and Breitenbach et al. and provide it with the expansion capabilities disclosed by Penczynski et al. for the purpose of improving the mechanical elasticity of the insulation.

4. Claims 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trautner et al. in view of Breitenbach et al. as applied to claim 28 above, and further in view of Platzer (U. S. Pat. 4,121,148).

Trautner et al. and Breitenbach et al. disclose an electric machine as described on item 1 above. However, neither Trautner et al. nor Breitenbach et al. disclose at least

one of a two-way field over-voltage protection mechanism and a discharge circuit connected across the field winding, and control equipment configured to control current converters and a field over-voltage protection mechanism or discharge circuit. Neither Trautner et al. nor Breitenbach et al. disclose the control equipment is configured to change a polarity of the current converters for switching a direction of the excitation current from the excitation system, and the control equipment configured to cause the over-voltage protection mechanism to be temporarily connected at transition from one to the other current direction.

Platzer discloses at least one of a two-way field over-voltage protection mechanism and a discharge circuit connected across the field winding, and control equipment configured to control current converters and a field over-voltage protection mechanism or discharge circuit. Platzer discloses that the control equipment is configured to change a polarity of the current converters for switching a direction of the excitation current from the excitation system, and the control equipment configured to cause the over-voltage protection mechanism to be temporarily connected at transition from one to the other current direction. Platzer's invention has the purpose of

It would have been obvious at the time the invention was made to modify the electric machine of Trautner et al. and Breitenbach et al. and provide it with the protection mechanism and control mechanism disclosed by Platzer for the purpose of

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Perez whose telephone number is (703) 306-5443. The examiner can normally be reached on Monday through Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308 1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3432 for regular communications and (703) 305 3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

Guillermo Perez
September 5, 2001

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